

TWO NEW SPECIES OF THE PREDACEOUS MIDGE GENUS
CLASTRIEROMYIA FROM URUGUAY WITH A NEW RECORD OF
C. SCHNACKI FOR ARGENTINA (DIPTERA: CERATOPOGONIDAE)

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Abstract.—The pupa, male, and female of *Clastrieromyia dycei*, new species, and the female of *C. uruguayensis*, new species, both from Uruguay, are described and illustrated. A key is presented to separate them from the two previously known species of this palpomyiine genus. The male and pupa of *Clastrieromyia* are described for the first time. *C. schnacki* Spinelli and Grogan is recorded for the first time from Argentina.

Spinelli and Grogan (1985) proposed the genus *Clastrieromyia* for two species, *C. schnacki* Spinelli and Grogan, the type-species, from Ecuador, and *C. kremeri* Spinelli and Grogan, from Amazonas, Brazil. They also compared *Clastrieromyia* with all of the other genera in the tribe Palpomyiini.

In this paper we describe two new species of *Clastrieromyia* recently collected in Uruguay and present a key to the four known species of the genus. The male and pupa of one of these new species, *C. dycei*, are the first known for the genus. *C. schnacki*, originally known only from Ecuador, also occurs in northern Argentina as we recently discovered a female taken 16 II 1969 by Martinez and Woodruff from Salta Province, Dto. San Martin, Rio Carapari, 8 km S. Pocitos in the collection of the Museo de La Plata, Argentina.

As a result of some peculiarities found in one of the new species (*C. dycei*), the generic diagnosis for *Clastrieromyia* as originally proposed by Spinelli and Grogan should be amended as follows: Wing with costa extending 0.87-0.98 in females. Antenna 0.9-1.3 times longer than breadth of head. Eversible glands of female abdomen usually with sclerotized gland rods (gland rods unsclerotized in *C. dycei* n. sp.).

The types of the new species are deposited in the collection of the Museo de La Plata, La Plata, Argentina (MLP) and the National Museum of Natural History (USNM), in Washington, D.C. Some paratypes will be deposited in the Australian National Insect Collection (ANIC), Canberra, Australia.

For an explanation of general ceratopogonid terminology see Downes and Wirth (1981); for special terms dealing with genera in the tribe Palpomyiini, see Grogan and Wirth (1979, 1981).

KEY TO SPECIES FOR FEMALE *CLASTRIEROMYIA*

1. Fore femur without ventral spines; costal ratio 0.98
..... *schnacki* Spinelli and Grogan
- Fore femur with 5-10 ventral spines; costal ratio 0.96 or less 2

2. Legs banded, proximal $\frac{2}{3}$ – $\frac{3}{4}$ of fore and mid tibiae and mid femur light brown, remainder of femora and tibiae dark brown *uruguayensis* n. sp.
- Legs unbanded, femora dark brown, tibiae dark or lighter brown but uniformly so 3
3. Small species, wing length 1.55–1.67 mm; narrow interocular space, 2.5–3.5 ommatidial facets wide; antennal ratio 1.29–1.46; gland rods present; costal ratio 0.92–0.96 *kremeri* Spinelli and Grogan
- Large species, wing length 1.97–2.20 mm; broad interocular space, 6–7 ommatidial facets wide; antennal ratio 0.66–0.82; gland rods absent; costal ratio 0.87–0.88 *dycei* n. sp.

Clastrieromyia dycei, NEW SPECIES

Fig. 1

Diagnosis.—A large species (wing length 1.97–2.20 mm) of *Clastrieromyia* distinguished from all other species in the genus by the absence of sclerotized abdominal gland rods (see key for a comparison with other species in the genus).

Female.—Wing length 2.08 (1.97–2.20, n = 4) mm; breadth 0.80 (0.77–0.82, n = 4) mm.

Head: Dark brown. Eyes bare, broadly separated (Fig. 1a) for a distance equal to the diameter of 7 ommatidial facets. Antennal flagellum (Fig. 1b) short, 0.9× the breadth of head, uniformly dark brown; lengths of flagellomeres in proportion of 16-9-9-9-9-9-9-12-13-13-13-14; antennal ratio 0.74 (0.66–0.82, n = 3). Palpus very short (Fig. 1c), pale brown; lengths of segments in proportion of 8-12-8-8-14; palpal ratio 1.70 (1.50–2.15, n = 4); 3rd segment with a few scattered mesoapical sensilla; 5th segment with 4–5 terminal setae. Mandible with 8–12 teeth.

Thorax: Dark brown; scutum without anterior spine or tubercle; scutellum yellowish. Legs slender; femora dark brown, tibiae slightly paler; tarsi whitish except 5th tarsomeres dark brown; fore femur armed with 6–8 ventral spines; ventral palisade setae absent on foretarsus, in one row on tarsomere 1 of mid leg, in two rows on tarsomeres 1 and 2 of hind leg; a pair of strong ventral spines at apices of tarsomeres 1–3 on mid leg, smaller and paler on fore and hind legs; hind tibial comb with 7 spines; hind tarsal ratio 2.30 (n = 4); 4th tarsomeres subcylindrical; 5th tarsomeres unarmed, claws equal without internal basal tooth, longest on hind leg. Wing (Fig. 1d) whitish hyaline, anterior veins pale yellow, the others nearly imperceptible; venation as figured, anal lobe well developed, cell R_5 with intercalary vein; costal ratio 0.88 (0.87–0.89, n = 4). Halter pale brown.

Abdomen: Yellowish brown, tapering distally; gland rods absent. Genitalia nearly identical to *C. kremeri* as described and illustrated by Spinelli and Grogan (1985), and except for spermathecae are not illustrated or described here. Two unequal oval spermathecae, with short necks and minute hyaline perforations, measuring 0.069 mm by 0.057 mm and 0.057 mm by 0.049 mm including necks; a small vestigial 3rd spermatheca present.

Male.—Wing length 1.40 mm; breadth 0.51 mm. Similar to female with the following notable differences. Antennal flagellum (Fig. 1e) with lengths of flagellomeres in proportion of 20-10-10-9-9-10-10-10-10-11-17-13-19; plume very reduced. Palpus with lengths of segments in proportion of 4-7-6-7-8. Wing (Fig. 1f) with membrane slightly infuscated; costal ratio 0.82. Genitalia as in Fig. 1g:

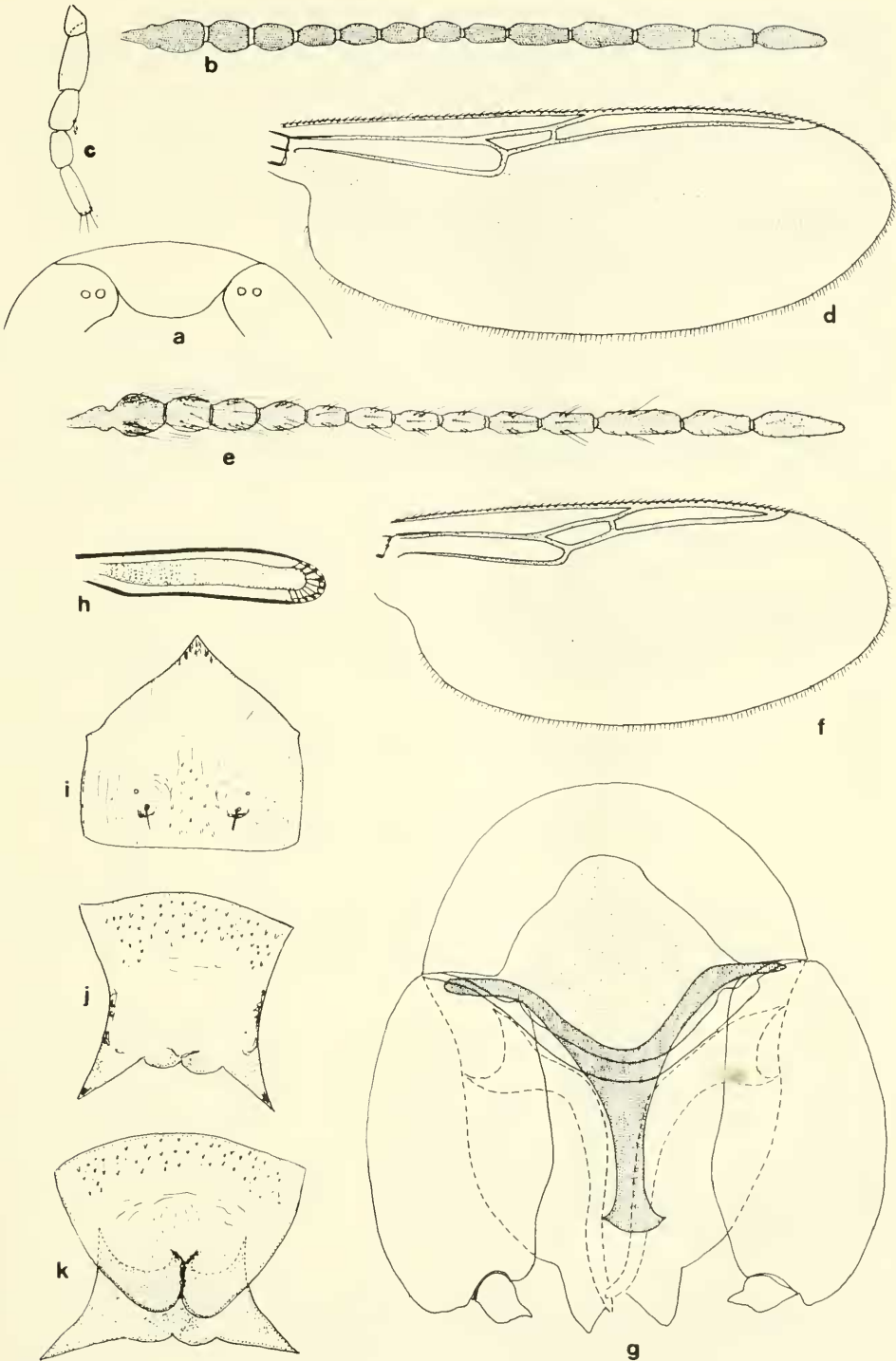


Fig. 1. *Clastrieromyia dycei*, a-d, female; e-g, male; h-k, pupa. a, Eye separation. b, e, Antennal flagella. c, Palpus. d, f, Wing. g, Genitalia. h, Respiratory horn. i, Female operculum. j, Female terminal segment. k, Male terminal segment.

sternite 9 short with a deep caudomedian excavation, caudal membrane spiculate; tergite 9 rounded distally, extending nearly to apex of gonocoxites; cercus short, extending just beyond apex of gonocoxite. Gonocoxite stout, twice as long as broad; gonostylus pointed, very reduced in length. Aedeagus heavily sclerotized, triangular; basal arch extending $\frac{1}{3}$ of total length of aedeagus; basal arm bent at nearly 90° distally; distal portion narrow with broader crescent-shaped tip. Parameres divided, heavily sclerotized; basal arms broad and bifurcate; distal portion slender, each portion produced beyond aedeagus, and extending to near the apex of gonocoxites where their tips cross each other.

Pupa.—Brownish. Length of female 3.5 mm; length of male 3.0 mm. Respiratory horn (Fig. 1h) short, about $\frac{1}{15}$ of total pupal length; 4 times longer than broad; surface bare; apex with 9–11 spiracles. Female operculum (Fig. 1i) as long as broad; anterior margin tapering to a pointed tip, posterior margin nearly straight; surface smooth with a few small tubercles medial to and posterior of *a. m.* tubercles. 2 *a. m.* tubercles, the posterior one bearing a single seta. Female terminal segment (Fig. 1j) with small pointed tubercles only on anterior margin; margins slightly wrinkled, tips heavily sclerotized. Male terminal segment (Fig. 1k) similar to that of female; ventral genital processes short, as figured.

Distribution.—Uruguay (Department of Tacuarembó).

Types.—Holotype ♀, allotype ♂ (USNM), 3 ♀, 3 ♂ paratypes all with associated pupal exuviae, Uruguay, Tacuarembó, Estancia Ipoa, 29-IX-1980, A. Dyce.

Discussion.—We are pleased to name this species in honor of Dr. Alan L. Dyce, of the C.S.I.R.O., McMaster Laboratory, Glebe, Australia, who collected the type-series.

The type-series were reared from pupae that were collected from a cattle-trodden bog adjacent to an excavated watering hole, the soil of which was sandy and sunlit.

Clastrieromyia uruguayensis, NEW SPECIES

Fig. 2

Diagnosis.—Distinguished from all other species in the genus by its banded legs with spinose fore femora, and by the very lightly sclerotized gland rods (see key for a comparison with other species in the genus).

Female.—Wing length 1.86 (1.70–1.94, $n = 3$) mm; breadth 0.75 (0.67–0.79, $n = 3$) mm.

Head: Dark brown. Eyes bare, separated (Fig. 2a) by a distance equal to the diameter of 6 ommatidial facets (0.12 mm). Antennal flagellum (Fig. 2b) short, dark brown; lengths of flagellomeres in proportion of 32-19-19-19-20-19-19-18-25-29-29-25-32; antennal ratio 0.87 (0.83–0.94, $n = 4$). Palpus short (Fig. 2c), pale brown; lengths of segments in proportion of 12-28-24-20-25; palpal ratio 1.93 (1.83–2.18, $n = 5$); 3rd segment with scattered mesoventral sensilla. Mandible with 8–11 coarse teeth.

Thorax: Dark brown. Scutum without anterior spine or tubercle; humeral areas pale brown, 2 pale brown spots on the prescutellar area; scutellum yellowish. Legs (Fig. 2d) dark brown except proximal $\frac{2}{3}$ of mid femur, proximal $\frac{3}{4}$ of fore and mid tibia lighter brown; tarsomeres 1–3 of fore and mid legs and tarsomeres 1 and 2 on hind leg whitish; fore femur armed with 5–8 ventral spines; mid tibia with a pair of strong ventral spines at apex; ventral palisade setae absent on foretarsus, in one row on tarsomere 1 of mid leg, in two rows on tarsomeres 1

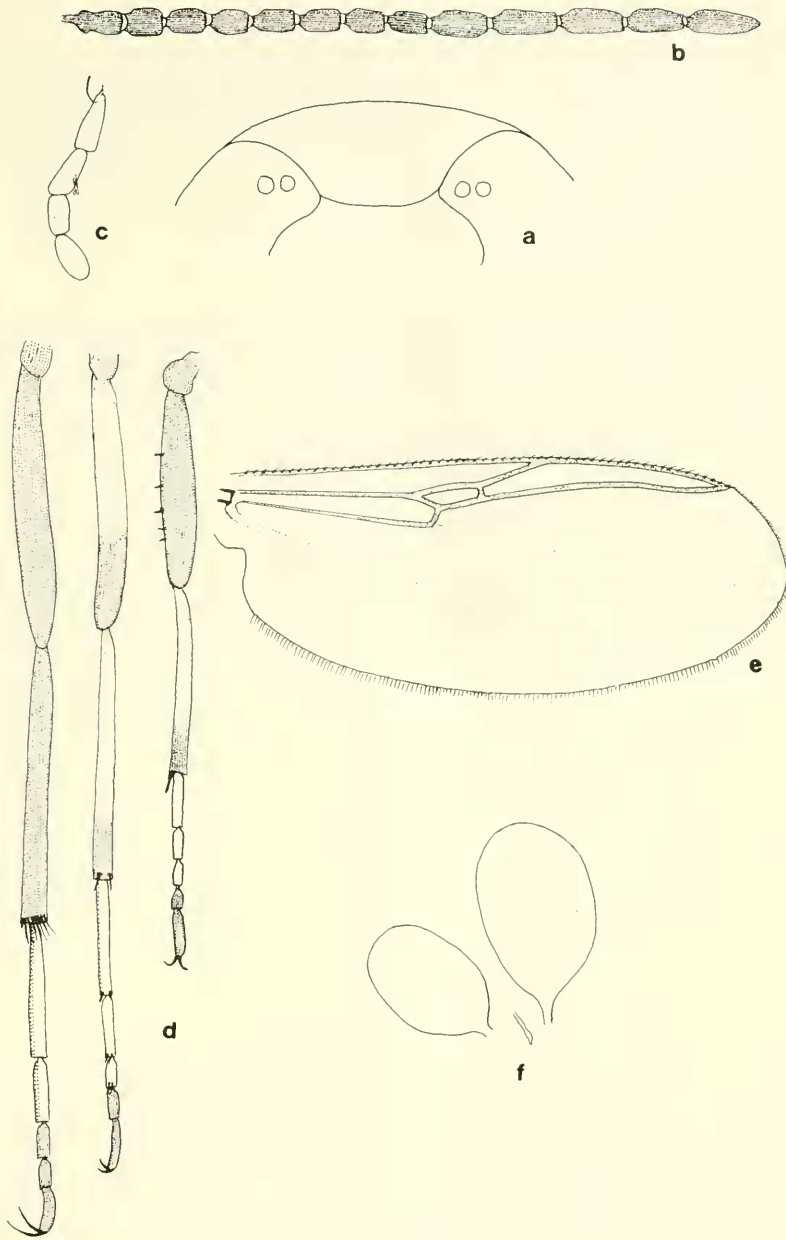


Fig. 2. *Clastrieromyia uruguayensis*, female. a, Eye separation. b, Antennal flagellum. c, Palpus. d, Legs. e, Wing. f, Spermathecae.

and 2 of hind leg; a pair of strong ventral spines at apices of tarsomeres 1–3 on mid leg, smaller and paler on fore and hind legs; hind tibial comb with 7 ($n = 5$) spines; hind tarsal ratio 2.28 (2.10–2.52, $n = 5$); 4th tarsomeres subcylindrical, 5th tarsomeres unarmed, claws equal without internal basal tooth, longest on hind leg. Wing (Fig. 2e) whitish hyaline, anterior veins pale yellow, the others nearly

imperceptible; venation as figured, anal lobe well developed, cell R_5 with intercalary vein; costal ratio 0.89 (0.88–0.90, $n = 3$). Halter white.

Abdomen: Whitish, tapering abruptly distally, with reddish spots on pleurae of segments 2–6. Genitalia nearly identical to *C. kremeri* as described by Spinelli and Grogan (1985) and except for spermathecae are not illustrated or described here. Two unequal oval spermathecae (Fig. 2f) with short necks and minute hyaline perforations, measuring 0.080 mm by 0.053 mm and 0.058 mm by 0.043 mm including necks; a small vestigial 3rd spermatheca present.

Male.—Unknown.

Distribution.—Uruguay (Departments of Artigas and Salto).

Types.—Holotype ♀, Uruguay, Artigas, Colonia San Gregorio (“arrocera de Conti”), 12-II-1985, G. R. Spinelli, light trap (MLP). Paratypes, 4 ♀, as follows: same data as holotype, 1 ♀; same data except 18-III-1985, 2 ♀; Uruguay, Salto, El Espinillar, 14-II-1985, G. R. Spinelli, 1 ♀, light trap.

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